

CLAIMS

1. An apparatus comprising:
 - a display for presenting information to a user;
 - a housing connected to the display for supporting the display; and
 - a keyboard assembly connected through a sliding connection to the housing, the keyboard assembly deployable in multiple directions, wherein the information presented to the user through the display is oriented based on
 - a direction of deployment of the keyboard assembly.
2. The apparatus of claim 1, wherein the keyboard assembly is deployable in a first direction and a second direction.
3. The apparatus of claim 2, wherein the first keyboard deployment direction presents a QWERTY key arrangement and the second keyboard deployment direction presents a phone style key arrangement.
4. The apparatus of claim 2, wherein the device is operable as a PDA and a phone.
5. The apparatus of claim 1, wherein the device is operable in a wireless environment.
6. The apparatus of claim 1, wherein the sliding connection is a track and carrier type of connection.
7. The apparatus of claim 1, wherein the display is a touch sensitive screen.

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8. A method for presenting information on a display to a user of a device, the device having a keyboard assembly deployable through a sliding connection, the keyboard assembly deployable in multiple directions, the method comprising:
 - detecting a direction in which the keyboard assembly is deployed; and
 - orienting information presented on the display with reference to a direction of deployment of the keyboard assembly.
9. The method of claim 8, further comprising:
 - orienting information presented on the display with reference to input by the user.
10. The method of claim 8 further comprising:
 - orienting information presented on the display with reference to input from an application resident on the device.
11. An apparatus comprising:
 - a display for presenting information to a user;
 - a housing connected to the display for supporting the display; and
 - a keyboard assembly connected through a sliding connection to the housing, the keyboard assembly deployable in multiple directions.
12. The apparatus of claim 11, wherein the keyboard assembly provides a first set of key arrangement, when deployed in a first direction, and provides a second set of key arrangement, when deployed in a second direction.

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13. An apparatus for presenting information on a display to a user of a device, the device having a keyboard assembly deployable through a sliding connection, the keyboard assembly deployable in multiple directions, comprising:

means for detecting a direction in which the keyboard assembly is deployed; and

means for orienting information presented on the display with reference to the direction of deployment of the keyboard assembly.

14. At least one processor for presenting information on a display to a user of a device, the device having a keyboard assembly deployable through a sliding connection, the keyboard assembly deployable in multiple directions, comprising:

means for detecting a direction in which the keyboard assembly is deployed; and

means for orienting information presented on the display with reference to the direction of deployment of the keyboard assembly.

15. A computer program product, comprising:

a computer-implemented medium embodying codes, which when executed by at least one processor, presents information on a display to a user of a device, the device having a keyboard assembly deployable through a sliding connection, the keyboard assembly deployable in multiple directions, the codes comprising:

codes for causing the computer to detect a direction in which the keyboard assembly is deployed; and

codes for causing the computer to orient information presented on the display with reference to the direction of deployment of the keyboard assembly.

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16. An electronic device, comprising:
 - a first module layer movable in a first direction;
 - a second module layer movably connected relative to the first module layer; and
 - a third module layer movably connected relative to the second module layer and movable in a second direction.
17. The device of claim 16, further comprising a display for presenting information to a user.
18. The device of claim 17, wherein the information is in a first orientation when the first module layer is moved in the first direction relative to the second module layer, and in a second orientation when the third module layer is moved in the second direction relative to the second module layer.
19. The device of claim 16, wherein the second module layer further comprises a first input mechanism exposable when the first module layer moves in the first direction relative to the second module layer, and wherein the third module layer further comprises a second input mechanism exposable when the third module layer moves in the second direction relative to the second module layer.
20. The device of claim 19, further comprising a display for presenting information to a user, wherein the information is in a first orientation when the first input mechanism is exposed and in a second orientation when the second input mechanism is exposed.
21. A portable electronic device, comprising:
 - a first component layer movable in a first direction;
 - a second component layer having a first set of functional components, the second component layer movably connected relative to the first component layer such that movement of the first component layer in the first direction exposes the first set of functional components and activates a first operational mode; and
 - a third component layer having a second set of functional components, the third component layer movably connected to one of the first component layer and the second

component layer, the third component layer movable in a second direction relative to the second component layer to expose a second set of functional components and activate a second operational mode.

22. A method of controlling relative movement between movable layers of an electronic device, comprising:

movably connecting a first module layer to a second module layer having a first functional component such that a relative movement of the first module layer in a first direction exposes the first functional component; and

movably connecting the second module layer to a third module layer having a second functional component such that a relative movement of the third module layer in a second direction exposes the second functional component.

preventing movement of the third module layer in the second direction during movement of the first module layer in the first direction.

23. The method of claim 22, further comprising preventing movement of the first module layer in the first direction during movement of the third module layer in the second direction.

24. A method for providing a versatile user interface for an electronic device, comprising:

exposing a first set of functional components on a second module layer movably connected to a first module layer, where the first set of functional components is associated with a first operational mode of the electronic device; and

exposing a second set of functional components on a third module layer movably connected to the second module layer, where the second set of functional components is associated with a second operational mode of the electronic device.

25. The method of claim 24, further comprising displaying information in a predetermined orientation depending on an operational mode of the electronic device.